

REMARKS

Claims 1-47 are pending in this application. Claims 46 and 47 have been added. Claims 2 and 12-16 have been elected for prosecution. Of the elected claims, claims 2 and 12 are generic.

Request for Examination of Non-Elected Claims

In response to the traversal of the election of species, the Examiner stated that the Applicant's argument was not persuasive "because the transmitter and the receiver are related as subcombinations disclosed as useable together in a single combination, whereas the receiver could be configured to respond to signals from more than one transmitter, not necessarily from a single transmitter." In other words, the Office Action presents an argument that the inventions are related and not mutually exclusive species, as would be required by an election of species (see M.P.E.P. 806.04(f) and M.P.E.P. 806.04(h)). Thus, the Office Action admits that the claims to the transmitter and receiver are not independent species. Accordingly, Applicant respectfully requests that the elected species covered by claims 1, 2, and 4-16 be examined.

Allowed Claims

Applicant wishes to thank the Examiner for indicating that claims 12-16 are allowed.

Drawings

Along with the Reply of November 20, 2003, Applicant had submitted corrected formal drawings. Applicant requests that an indication of approval of the corrected formal drawings be made in response to this reply.

Claim Rejection

Claim 2 has been rejected under 35 U.S.C. 103(a) as being unpatentable by Renard et al. (U.S. Patent 6,081,691, "Renard"). Applicant respectfully traverses this rejection.

Applicant submits that Renard does not actually teach a receiver that restores signal waves to former frequency bands.

Claim 2 recites, "...frequency-converting said at least one modulation signal wave to restore said plurality of modulation signal waves respectively having the former frequency bands."

Renard, on the other hand, teaches a receiver that applies received radio frequency signals to a set of frequency transposition circuits to produce signals at smaller intermediate frequencies than the carriers L1 (Renard at column 6, lines 35-38). The frequency transposition ends up at frequencies which can be processed by the subsequent signal processing circuits. In other words, Renard teaches frequency transposition of all signals to lower frequencies.

According to the disclosure for the first embodiment of the present invention, the adjustments to the terrestrial broadcasting signal enable removal of abruptness of characteristics of filter 13 in the frequency up-converter 2 and in filter 35 in the frequency down-converter 32 (statements at the top of page 18). In particular, in the transmitter, the terrestrial broadcasting signal is first converted into a signal of a higher frequency band (an intermediated frequency) followed by up-conversion to the millimeter wave band. In the receiver, the multiplexed signal is down-converted to an intermediate frequency. The multiplexed signal is divided and just the terrestrial broadcasting signal is further down converted to the original UHF band. The satellite broadcasting signal is amplified, adjusted, and then outputted.

Thus, claim 2 has been amended to clarify the definition of "frequency-converting" in the phrase "while frequency-converting at least one of said plurality of modulation signal waves" to mean converting "to a frequency which is higher than that of the modulation signal wave." In other words, of the plurality of modulation signal waves coupled to generate a millimeter wave band multiplex signal wave, at least one of the modulation signal waves had been frequency converted to a higher frequency. The claimed frequency arranging circuit then further frequency converts the at least one modulation signal wave (i.e., after the down-converter in the frequency down-converter) to restore

it back to its former frequency band. See for example the two steps up in frequency (Figure 1: mixers 6 and 12), and two steps down in frequency (Figure 1: mixers 37 and 42).

Thus, Applicant submits that Renard fails to teach each and every element of claim 2. Applicant respectfully requests that the rejection be withdrawn.

New Claims

Claims 46 and 47 have been added. Claim 46 recites that one other modulation signal wave is maintained in the frequency arranging circuit (e.g., the satellite signal wave in Figure 1 is maintained and not further down-converted). Claim 47 is comparable to amended claim 46 and recites the language of amended claim 2, as well. For the same reasons as above for claim 2, Applicant submits that Renard fails to anticipate these claims as well.

CONCLUSION

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert W. Downs (Reg. No. 48,222) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 

Terrell C. Birch, #19,382

RWD
TCB/RWD/ph
0033-0662P

P.O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000